Memorandum

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Federal Communications Commission
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From: Greer Goldman
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Re: The standard under NEPA for evaluating the significance of bird mortality from communications towers in light of other impacts on birds

Introduction and Summary

The National Environmental Policy Act ("NEPA") requires agencies to evaluate the environmental impacts for all "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332. "[I]f *any* significant environmental impacts might result from the proposed agency action, then an [analysis] must be prepared *before* the action is taken." *Am. Bird Conservancy, Inc. v. F.C.C.*, 516 F.3d 1027, 1034 (D.C. Cir. 2008) (internal quotation marks and citations omitted). The evaluation must include the direct, indirect, and cumulative impacts on the environment — not just those caused by the action. *Grand Canyon Trust v. F.A.A.,* 290 F.3d 339 (D.C. Cir. 2002). And the evaluation must consider the context and intensity of the impacts, including potential violations of other federal laws. For example, the killing of birds at communications towers implicates the Endangered Species Act ("ESA") and the Migratory Bird Treaty Act ("MBTA"). Thus, the significance of the impact of communications towers on birds is not lessened by other or even greater sources of harm to birds for purposes of the NEPA analysis.

It is estimated that there are between 117 and 157 million outdoor, feral and stray cats in the United States that kill more than 1 million birds every day. Nico Dauphiné & Robert J. Cooper, Pick One: Outdoor Cats or Conservation: The Fight Over Managing an Invasive Predator, 5 The Wildlife Prof. 50, 50-52 (Spring 2011). Published estimates of the annual loss of birds due to collisions with glass windows range from nearly 100 million to nearly 1 billion birds a year. Travis Longcore, Species Composition of Birds Killed at Communication Towers in North America: Draft in Preparation for Publication, January 14, 2011, 1, 13 (internal citations omitted); Daniel Klem, Jr., Avian Mortality at Windows: The Second Largest Cause of Bird Mortality on Earth (2009), at 246, *available at* http://aco.muhlenberg.edu/documents/Klem_PIF09-Final-rec-1-XII-09.pdf. Meanwhile communication towers are estimated to kill between 3.9 and 5.4 million birds per year according to a recent study. Travis Longcore, An Estimate of Avian Mortality at Communication Towers in the United States and Canada: Draft in Preparation for Publication, January 14, 2011, 1, 2.

Although cats and windows kill more birds than towers, the level of mortality from towers is the equivalent of 15 Exxon Valdez spills every year. *Id.* at 18. Furthermore, while individual incidents may have a negligible impact on birds in general, they could have a significant impact on individual species or populations. Longcore, Species Composition, 5. "Species or populations should be the unit of analysis in most instances" in determining whether something impacts a species or population group within the species. *Id.* at 4-5. For instance:

> [A]lthough the 20 avian species killed most frequently at windows do not contain any federal Birds of Conservation Concern, the 20 avian species killed most frequently at towers contain two such species and those species killed in greatest proportion to their populations at towers are predominantly Birds of Conservation Concern.

Id. at 14. Thus, to present an accurate picture of the significance of the impacts on birds from communications towers subject to the Antenna Structure Registration ("ASR") program, an environmental analysis must take into account specific bird species that are harmed and to what degree they are harmed by all sources – windows, cats, and towers – and evaluate the context an intensity of the impacts under review, as required by NEPA.

Regulatory Standard for Evaluating Direct, Indirect, and Cumulative Impacts

As noted above, NEPA requires agencies to evaluate the environmental impacts for all "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332. Implementing regulations promulgated by the Council on Environmental Quality ("CEQ") defines "affecting" to mean "will or may have an effect on," 40 C.F.R. § 1508.3, and further define "effects" to include:

> (a) Direct effects, which are caused by the action and occur at the same time and place.
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> (b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.
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> Effects and impacts as used in these regulations are synonymous. *Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.* Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

Id. at § 1508.8 (emphasis added).[1] "Cumulative impact" – as set forth in the CEQ regulations and referenced in FCC regulations, § 1508.27(b)(7) – means:

> the impact on the environment which results from the incremental impact of the action *when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.* Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Id. at § 1508.7 (emphasis added). "Individually minor but collectively significant actions, taking place over time, can generate cumulative impacts." *Senville v. Peters*, 327 F. Supp. 2d 335, 348 (D. Vt. 2004) (citing 40 C.F.R. § 1508.7).

Thus, NEPA's mandate to include all these specified effects requires the FCC to consider not only the immediate impacts of the towers, but also the long term impacts of the continual take of birds from all sources of harm and the impact of that take on affected ecosystems.

Cases Applying the Applicable Standard for Evaluating Multiple Impacts

In *Grand Canyon Trust v. F.A.A.,* 290 F.3d 339 (D.C. Cir. 2002), the United States Court of Appeals for the District of Columbia Circuit reviewed the case law on cumulative impacts as of that time and declared: "[T]he consistent position in the case law is that, depending on the environmental concern at issue, the agency's environmental assessment must give a realistic evaluation of the total impacts and cannot isolate a proposed project, viewing it in a vacuum." *Id.* at 342. In that case, the Trust challenged the adequacy of the FAA's environmental assessment for a proposed replacement airport near Zion National Park. Focusing on the noise impacts, the Trust argued that the FAA addressed only the incremental impact of the project and failed to consider the project's cumulative impact, *i.e.*, the project's contribution to existing adverse conditions in the area. The court rejected the agency's view and embraced the Trust's interpretation of the law. The court noted that the regulatory definition of cumulative impacts specifies that the "'incremental impact of the action' [at issue] must be considered 'when added to other past, present, and reasonably foreseeable future actions.'" *Id.* (quoting *Coalition on Sensible Transp. v. Dole*, 826 F. 2d 60, 70-71 (D.C. Cir. 1987)). The court further discussed the need for a broad-based review of impacts, including consideration of "the cumulative impact . . . of simultaneous development in the region on species . . . that migrate through the different planning areas . . . [and consider] the interregional effects." *Id*. (citing *Natural Res. Def. Council v. Hodel*, 865 F. 2d 288, 297-99 (D.C. Cir. 1988)).

[1] The FCC references CEQ guidelines in their NEPA procedures. 47 C.F.R. § 1.1302. The D.C. Circuit has stated that: "Because the CEQ has no express regulatory authority under NEPA, it was empowered to issue regulations only by executive order-the binding effect of CRQ regulations is far from clear." *Nevada v. Dep't of Energy*, 457 F.3d 78, 87 n.5 (D.C. Cir. 2006) (internal quotation marks and citations omitted). However, when an agency incorporates them, the D.C. Circuit accepts them as binding as well. *Id.*

The *Grand Canyon* court noted further that other circuits had taken a similar approach in applying the regulations. Citing *Hanly v. Kleindienst*, 471 F.2d 823, 831 (2d Cir. 1972), the court ruled that NEPA requires review of a proposed action in light of "the cumulative harm that results from [the action's] contribution to existing adverse conditions or uses in the area." 290 F.3d at 343. As the Second Circuit had ruled in *Hanly*, "[E]ven a slight increase in adverse conditions that form an existing environmental milieu may sometimes threaten harm that is significant. One more factory . . . may represent the straw that breaks the back of the environmental camel. Hence the absolute, as well as comparative, effects of a major federal action must be considered." 471 F. 2d 823 at 831.

Rejecting the FAA's incremental approach, the D.C. Circuit declared in *Grand Canyon*: "The analysis in the EA, in other words, cannot treat the identified environmental concern in a vacuum, as an incremental approach attempts." 290 F.3d at 346.[2] The court held that when an agency evaluates the incremental impact of an action, 40 C.F.R. § 1508.7 directs an agency to consider that incremental impact when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes other actions. 290 F.3d at 343. The actions to be evaluated need not be related, but merely cumulative. As the court noted, 40 C.F.R. 1508.27(b)(7) states that "[s]ignificance exists if it is reasonable to anticipate a cumulatively significant impact on the environment." *Id.*

Recent cases apply the same standard. *See*, *e.g*., *Nat'l Audubon Soc'y v. Dep't of the Navy*, 422 F.3d 174, 196 (4th Cir. 2005) ("NEPA requires an agency to consider not only the direct effects of an action, but also the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." (internal quotations and citations omitted)); *Great Old Broads for Wilderness v. Kempthorne*, 452 F. Supp. 2d 71 (D.D.C. 2006) (rejecting the agency's environmental assessment for lack of a sufficient cumulative impact analysis). Furthermore, the impacts to be evaluated are not limited to those caused by human actions. *See Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062 (9th Cir. 2002) (highlighting the need to consider the impact of fungus that is fatal to trees as part of the cumulative impact analysis of harvests); *Vt. Pub. Interest Research Group v. U.S. Fish & Wildlife Serv.*, 247 F. Supp. 2d 495 (D. Vt. 2002) (approving of the agency's consideration of the potential cumulative impact of zebra mussels on mussel species in the delta or estuarine habitats). This is the standard that must be applied in evaluating the impact of towers on birds. The fact that cats and windows kill much greater numbers of birds than do communications towers does not make insignificant the impact

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[2] The Court went on:

> Although the replacement airport may contribute only a 2% increase to the amount of overflights near or over the Park, there is no way to determine from the FAA's analysis in the EA whether, deferring to the FAA's expert calculations, a 2% increase, in addition to other noise impacts on the Park, will "significantly affect[]" the quality of the human environment in the Park. At no point does the FAA's EA aggregate the noise impacts on the Park. … Without analyzing the total noise impact on the Park as a result of the construction of the replacement airport, the FAA is not in a position to determine whether the additional noise that is projected to come from the expansion of the St. George airport facility at a new location would cause a significant environmental impact on the Park and, thus, to require preparation of an EIS.

290 F.3d at 346.

of the towers on birds and the environment; if anything, it may increase the significance of the impact because towers may be "the straw that breaks the back of the environmental camel" or in this case, the birds.

Regulatory Standard for Evaluating Context and Intensity of Impacts

To refine the analysis of direct, indirect, and cumulative impacts, the CEQ regulations require consideration of both context and intensity when determining the significance for NEPA purposes. 40 C.F.R. § 1508.27.

Context means "the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. *Id.* at § 1508.27(a). For example, the building of a tower has a strong local impact and the overall Antenna Structure Registration ("ASR") program for licensing towers has a national impact. This makes it necessary for the FCC to consider both local and national impacts of the licensing process.

Intensity, as defined in the regulations, refers to the severity of the impact. Ten factors are identified for consideration when determining intensity, including:

> The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973; and
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> Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Id. at § 1508.27(b) (emphasis added). Thus, the evaluation of the intensity of the impacts should include consideration of potential violations of federal law, notably the ESA and the MBTA.

ESA

As the FCC is aware, Section 7 of the ESA requires that agencies consult with either the U.S. Fish and Wildlife Service ("FWS") or with the National Oceanic and Atmospheric Administration in order to:

> insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species . . . In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.

16 U.S.C. § 1526(a)(2). As the Supreme Court has held, "[t]his language admits of no exception." *TVA v. Hill*, 437 U.S. 153, 173 (1978). FWS has issued regulations requiring consultation anytime that an action "*may* affect listed species or critical habitat." 50 C.F.R. §

402.14(a) (emphasis added), *see also* 16 U.S.C. § 1533(4)(d) (giving FWS the authority to create regulations to protect listed species). FWS has defined "effects of the action" broadly as

> the direct and indirect effects of an action on the species or critical habitat, . . . that will be added to the environmental baseline. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur.

50 C.F.R. § 402.02. "The proper baseline analysis is not the proportional share of responsibility the federal agency bears for the decline in the species, but what jeopardy might result from the agency's proposed actions in the present and future human and natural contexts." *Pac. Coast Fed'n of Fishermen's Ass'ns v. U.S. Bureau of Reclamation*, 426 F.3d 1082, 1093 (9th Cir. 2005) (internal citations omitted). If, after consultation, FWS determines that an agency action will result in the destruction of a critical habitat and/or jeopardize the continued existence of the species, then the project cannot go forward. *See TVA v. Hill*, 437 U.S. 153 (1978). An action may proceed if FWS determines either that the action will not violate the ESA or requires "reasonable and prudent measures" to be performed that will make it so that the action does not violate the ESA. 16 U.S.C. § 1536(b)(4). *See, e.g.*, *Cabinet Mountains Wilderness/ Scotchman's Peak Grizzly Bears v. Peterson*, 685 F.2d 678, 683-84 (D.C. Cir. 1982) (upholding the sufficiency of the Forest Service's analysis of cumulative impacts since the Forest Service consulted with FWS, and "[t]he Forest Service's final environmental assessment incorporated the recommendations made in the biological evaluation and biological opinion and expressly adopted the complete compensation plan devised by the FWS.").

Applying that standard to the FCC's ASR program, the FCC should consult with FWS to assure that ASR procedures comply the requirements of the ESA.

MBTA

The MBTA prohibits killing of other take or possession of migratory birds unless in accordance with regulations issued by the Department of the Interior. 16 U.S.C. § 703(a). The Act covers a multitude of violations, contains strict liability for misdemeanor violations, and does not exempt violators from liability merely because there are other causes of violations. *See e.g.*, *United States v. Moon Lake Elec. Ass'n*, 45 F. Supp. 2d 1070, 1071 (D. Colo. 1999) (permitting a prosecution to proceed against a power company for "fail[ing] to install inexpensive equipment on 2,450 power poles . . . causing the deaths of 12 Golden Eagles, 4 Ferruginous Hawks, and 1 Great Horned Owl"). The Tenth Circuit, quoting *Moon Lake* concluded that "there is a difference between accidental killings and those that could be prevented through reasonable measures," indicating that liability is present if reasonable measures could prevent the taking of a migratory bird. *United States v. Friday*, 525 F.3d 938,

959 (10th Cir. 2008). Similarly, the existence of other threats to migratory birds – such as from windows and cats – would not affect liability under the MBTA.

The D.C. Circuit has held that the MBTA bans federal agencies from taking part in activities that would "take" migratory birds, unless the activity is specifically permitted by the Department of the Interior.[3] *Humane Soc'y of the U.S. v. Glickman*, 217 F.3d 882, 886-87 (D.C. Cir. 2000) (holding that the MBTA applies to federal agencies as well as the public); s*ee also Robertson v. Seattle Audubon Soc'y*, 503 U.S. 429, 437-39 (1992) (discussing limitations that the MBTA places on federal agency actions).

Conclusion

The standard is clear, based on the regulations and case law, that in order to comply with NEPA's mandate, the FCC's EA must consider the impact of bird kills at towers cumulatively with the impacts of cats, windows, and other sources of harm to birds, as well as the FCC's obligations to comply with the ESA, and the MBTA to evaluate the significance of the impacts of towers on birds.

[3] The D.C. Circuit rejected the finding of the Eighth and Eleventh Circuits that the MBTA does not apply to federal agencies because the criminal penalty does not apply to the Federal Government. *Humane Soc'y of the U.S. v. Glickman*, 217 F.3d at 888 (citing *Newton County Wildlife Ass'n v. U.S. Forest Service*, 113 F.3d 110, 115 (8th Cir. 1997) and *Sierra Club v. Martin*, 110 F.3d 1551, 1555 (11th Cir. 1997)).